銅存在下 6π- 電子環状反応を用いたピリド [4,3-*b*] カルバゾールアルカロイドの簡便な全合成

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Concise Total Synthesis of Pyrido[4,3-*b*]carbazole Alkaloids Using Copper-Mediated 6π-Electrocyclization

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ABSTRACT: Concise syntheses of 9-methoxyellipticine, 3,4-dihydroellipticine (μ-alkaloid D), 1,2,3,4-tetrahydroellipticine, 2-methyl-1,2,3,4-tetrahydroellipticine, olivacine, 3,4-dihydroolivacine, (±)-guatambuine, and (±)-janetine were developed starting from hexatriene intermediates readily obtained by Pd-catalyzed tandem cyclization/cross-coupling reaction of indolylborates. The route enables the facile construction of pyrido[4,3-*b*]carbazoles by Cu-catalyzed 6π-electrocyclization and subsequent transformation of the pyridocarbazole intermediates into pyrido[4,3-*b*]carbazole alkaloids.

抄録　インドリルボラートの Pd 触媒によるタンデム環化 / クロスカップリング反応によって容易に得られるヘキサトリエン中間体を経由した 9-methoxyellipticine、3,4-dihydroellipticine(μ-alkaloid D)、1,2,3,4-tetrahydroellipticine、2-methyl-1,2,3,4-tetrahydroellipticine、olivacine、3,4-dihydroolivacine, (±)-guatambuine および (±)-janetine の簡便な合成法を開発した内容である。

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